Interpersonal violence and illicit drugs

1. Introduction to the topic and purpose of briefing

Interpersonal violence (see Box 1) and illicit drug use are major public health challenges that are strongly linked. Involvement in drug use can increase the risks of being both a victim and/or perpetrator of violence, while experiencing violence can increase the risks of initiating illicit drug use. Debate continues as to whether the relationship between drugs and violence is causal or an association, with the two being linked through shared risk factors (see Table 2). The impacts of drug-related interpersonal violence can be substantial, damaging individuals' health and the cohesion and development of communities, whilst also shifting resources from other priorities, particularly within health and criminal justice services. Globally, interpersonal violence accounts for around half a million deaths per year (1); for every death there are many more victims affected by violence physically, psychologically, emotionally and financially. Illicit drugs are used by millions of individuals throughout the world, and both their effects and the nature of illicit drug markets place major burdens on health and society (2-4).

This briefing summarises the links between interpersonal violence and illicit drug use, identifies risk factors for involvement in drug-related violence, outlines prevention measures that address drug-related violence, and explores the role of public health in prevention. It discusses links between drugs and violence based on available evidence, focusing primarily on illicit drugs. In general, the illicit use of prescription drugs is not discussed and the links between alcohol and violence have been covered elsewhere (5).

Box 1: Interpersonal violence

Interpersonal violence is *the intentional use of physical force or power, threatened or actual, against another person that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation* (1). Interpersonal violence can be categorised as:-

- Youth violence: violence committed by young people.
- Child maltreatment: violence and neglect towards children by parents and caregivers.
- Intimate partner violence: violence occurring within an intimate relationship.
- Elder abuse: violence and neglect towards older people by family, carers or others where there is an expectation of trust.
- Sexual violence: sexual assault, unwanted sexual attention, sexual coercion and sexual trafficking.

2. Magnitude of drug-related interpersonal violence

Internationally, there are wide geographical variations in illicit drug use (Table 1). Whilst cannabis is the most widely used drug globally, use ranges from around 2% of the population aged 15-64 in Asia to 15% in the Oceania region (6). Rates of mortality from violence also vary, from 14.4 per 100,000 of the population in high income countries to 32.1 per 100,000 in low to middle income countries (1).

Table 1: Global average estimates of use of selected illicit drugs by region, all people aged 15 to 64 years (2006 or latest year) (6)

Region	Cannabis		Amphetamines		Ecstasy		Cocaine		Heroin	
	Number of users (thousands)	%	Number of users (thousands)	%	Number of users (thousands)	%	Number of users (thousands)	%	Number of users (thousands)	%
EUROPE	29,200	5.3	2,490	0.5	2,947	0.5	4,008	0.8	3,130	0.6
Western/Central	22,100	6.9	1,950	0.6	2,624	0.8	3,895	1.2	1,370	0.4
South-East	1,700	2.0	180	0.2	204	0.2	67	0.1	130	0.2
Eastern	5,400	3.7	350	0.2	117	0.1	46	0.0	1,630	1.1
AMERICAS	40,500	6.9	5,670	1.0	3,094	0.5	10,196	1.7	1,520	0.3
North	30,600	10.5	3,720	1.3	2,367	0.8	7,097	2.4	1,270	0.4
South	9,900	3.4	1,960	0.7	727	0.3	3,099	0.8	250	0.1
ASIA	51,100	2.0	13,750	0.5	2,103	0.1	335	0.0	6,080	0.2
OCEANIA	3,200	14.5	470	2.9	706	3.2	301	1.4	30	0.1
AFRICA	41,600	8.0	2,260	0.4	199	0.0	1,147	0.2	1,210	0.2
GLOBAL	165,600	3.9	24,650	0.6	9,047	0.2	15,987	0.4	11,970	0.3

Data on the involvement of illicit drugs in violence are not routinely collected on an international basis, whilst many incidents of violence are unrecorded by health or criminal justice agencies. Despite this, a range of research has identified the extent of drug-related violence victimisation and perpetration in specific settings and populations.

Illicit drug use by perpetrators of violence

- In Los Angeles, USA, 35% of methamphetamine users aged 18-25 years old were found to have committed violence while under the influence of the drug (7).
- In Memphis, USA, victims and family members believed that 92% of perpetrators of intimate partner violence had used drugs or alcohol during the day of the assault and 67% had used a combination of cocaine and alcohol (8). A study on intimate partner violence in China found that partners who used illicit drugs[a] were significantly more likely to abuse their spouses physically, sexually, or both (9).
- Results from the British Crime Survey 2007/08 showed that victims of violent crime believed the offender to be under the influence of drugs in 19% of incidents (10).
- In Australia, perpetrators of violence against nurses in emergency departments were perceived to be under the influence of drugs in 25% of cases (11).
- In Atlanta, USA, ecstacy users with higher levels of lifetime use exhibited higher rates of aggressive and violent behaviour (12).
- In Rhode Island, USA, a quarter of women arrested for intimate partner violence and referred by courts to intimate partner violence prevention programmes reported symptoms consistent with a drug-related diagnosis (13).
- In Canada, boys reporting sexual harassment perpetration were seven times more likely to use drugs and girls four times more likely to use drugs (14).
- In a study of violence in youth holiday resorts among young German, Spanish and British holidaymakers, the use of cocaine during the holiday was associated with triple the odds of involvement in fighting and use of cannabis with double the odds (15).
- In England and Wales, 12% of arrestees held for assault tested positive for cocaine use and 24% for opiate use (excluding methadone) (16).
- Amongst patients to emergency departments in Cape Town and Durban in South Africa those with violence-related injuries were more likely to test positive for drugs than patients with other injury types (17).

[a] Where the type of drug used is not defined, this is because the source does not provide this information.

Illicit drug use by victims of violence

- In Victoria, Australia, 17.5% of sexual assaults were allegedly drug facilitated. Of these, many had knowingly consumed recreational or prescriptive drugs prior to the assault taking place (18).
- In the USA, victims of child physical or sexual abuse, or neglect have been estimated to be 1.5 times more likely to report illicit drug use, particularly cannabis, in adulthood during the past year than non-abused individuals (19).
- In a European survey on violence victimisation among dependent drug users in Austria, England, Germany and Switzerland, 42% reported a history of being attacked, assaulted or molested in the last six months (20).
- In the USA, women's use of hard drugs[b] including cocaine and heroin was associated with increased odds of experiencing intimate partner violence in ongoing relationships; both cannabis and hard drug use were associated with increased likelihood of being a victim of intimate partner violence in new relationships (21).
- In Ontario, Canada, individuals reporting parental substance use were at more than twice the risk of exposure to childhood physical and sexual abuse (22).
- In emergency room studies, cannabis and cocaine use in combination with alcohol were related to violence-related injuries in the UK, Canada and South Africa (23).
- In Scotland, 25% of drug users had been assaulted in the last six months (24).

Violence within illicit drug markets

The lack of formal social and economic controls in illicit drug markets facilitates the spread of violence. Without legal means for resolving business conflicts within drug markets, there is a tendency for violence to emerge as the dominant mechanism of conflict resolution (25-29). Furthermore, gangs and individuals involved in the drug dealing often carry guns for self defence from other groups or individuals who pose a threat to drug operations (30,31).

- In Pittsburgh, USA, almost 80% of 19 year olds who sold hard drugs such as cocaine were found to also carry a gun (32).
- In England and Wales approximately one third of all arrestees reported owning or holding a gun at some time in their lives; a key reason for doing so was for protection or self defence in buying or selling drugs (16).

[b] Whilst there is no internationally agreed terminology for discussing hard drug use, this brief will use this term to refer to the use of cocaine, heroin and methamphetamines.

- In the Caribbean, drug sales and trafficking have led to increases in armed gangs who are attracted by the profits made through such activities (33).
- The presence of drug-gangs in the favelas of Rio de Janeiro, Brazil, contributes to a continued influx of weapons to the community and associated violence (34).

3. Mechanisms linking interpersonal violence and illicit drugs

There are multiple mechanisms linking interpersonal violence and illicit drug use. These links are far from simple and although associations are well established, few studies have examined causal relationships. Different illicit drugs have different effects and as such some drugs may be related to violence more than others. Individual personality and biological factors, situational factors (the setting in which drug use occurs) and socio-cultural factors are all influential in this relationship (31,35-39).

Three theoretical explanations for the drug-violence relationship have been proposed. Firstly, drug use may be linked to violence at the direct *psychopharmacological* level. Here, as a result of short- or long-term ingestion of specific substances, individuals may experience changes in physiological functioning that, in an unintoxicated state, restrain behaviour. Secondly, drug-related violence can be *economic compulsive*, in that individuals addicted or dependent on illicit substances (e.g. cocaine and heroin) will commit crimes, including violent crimes, as a means to fund their drug use (25,40-47). Thirdly, drug-related violence can be *systemic*, with violence being an inherent part of the illicit drug market. Violence is used to enforce the payment of debts, to resolve competition between dealers, and to punish informants (25-29,40,44,45,47,48).

Research into the drugs-violence relationship has shown that:

- The effects of some drugs, including crack/cocaine, amphetamines and benzodiazepines have been found to increase aggressive and violent behaviour (29,35,38,40,46,49-55). Whilst cannabis and heroin use can reduce the likelihood of violence during intoxication, some studies suggest that withdrawal from long-term use is associated with aggression (6,7,40,47,49,56).
- Individual beliefs and expectations of the effects of drugs (e.g. increased confidence and aggression) mean that some drugs are used in preparation for involvement in violent behaviour (57-59).
- Drugs and violence may be linked as those involved in one form of deviance such as drug use may be more likely to engage in other deviant behaviours such as violence (7,40,60,61).
- Experiencing violence and living in dysfunctional households (e.g. where illicit drugs are consumed amongst household members) during childhood is associated with drug use in later life (62,63).

- Drugs are used as a coping mechanism to deal with the distress associated with being a victim of violence (64-66).
- Exposure to unsafe environments in which drug use occurs increases an individual's risk of violent victimisation (67).
- Prenatal and perinatal drug use by parents have been shown to increase levels of stress amongst parents and may result in subsequent child maltreatment (68,69), whilst drug dependence can also lead to individuals failing to fulfil parental responsibilities (67).

4. Shared risk factors for illicit drug use and interpersonal violence

A range of factors can increase an individual's risk of being a victim and/or perpetrator of drug-related interpersonal violence. Whilst illicit drug use alone is a risk factor for violence (1), many of the risk factors for drug use are also shared with those for involvement in violence. Table 2 follows the ecological model (1) for understanding factors related to illicit drug use and interpersonal violence by identifying shared risk factors associated with the individual, relationships between individuals, and communities and society.

Table 2: Shared risk factors for illicit drug use and interpersonal violence (1,40,70,71)

<table>
<tr><th>Individual (microlevel)</th><th>Relationship (mesolevel)</th></tr>
<tr><td>• Stress/depression/anxiety</td><td>• Parental substance abuse and deviance</td></tr>
<tr><td>• Personality and behavioural problems including impulsivity, hyperactivity, sensation seeking and attention problems</td><td rowspan="2">• Family interaction including low parental monitoring, poor supervision and discipline, family conflict, low parental expectations, parental rejection, low level of family cohesion</td></tr>
<tr><td>• Aggression</td></tr>
<tr><td>• Mental health problems</td><td>• Family structure - single parents and divorce</td></tr>
<tr><td>• Gender - males[c]</td><td>• Peer behaviour (e.g. drug using peers)</td></tr>
<tr><td>• Age - young people[d]</td><td>Community and societal (macrolevel)</td></tr>
<tr><td rowspan="3">• Education and school performance including absence, truancy, lack of formal support and low educational aspirations</td><td>• High drug availability</td></tr>
<tr><td>• Low socio-economic status</td></tr>
<tr><td>• Neighbourhood disorder</td></tr>
</table>

[c] However, women are more at risk of becoming a victim of certain types of violence such as sexual violence.

[d] This does not include elder abuse.

5. Risk factors for drug-related interpersonal violence

The below sections outline a range of risk factors specifically linked to drug-related interpersonal violence.

Individual level factors

Gender: In general, males are more at risk of experiencing violence and correspondingly drug-related violence (40,54,72,73). For example, a study of heroin users in Scotland found that males were significantly more likely to have been victims and perpetrators of assault than women (24). However, women who have been abused and/or neglected in childhood may be at greater risk than males of subsequently developing drug use and dependence and being arrested for both violent and non-violent crimes (74). In a Norwegian study, female hard drug users admitted to treatment had experienced more childhood emotional and sexual abuse and neglect than males (75).

Age: Age is a risk factor for both violence perpetration and victimisation among drug users (72,76). Young people[e] are at a higher risk of drug-related interpersonal violence, particularly intimate partner and gang-related violence (32,34,73,76,77).

Gang membership: Gang membership is a risk factor for both drug use and violence perpetration. Research shows that the use of drugs such as cannabis, ecstasy and cocaine is often integrated into the day-to-day activities of criminal subcultures and gangs (59). In Latin America and the Caribbean, youth gangs involved in drug trafficking are involved in higher levels of violence than young people who do not belong to a gang (78).

Psychiatric factors: There are elevated levels of psychiatric conditions, particularly Post Traumatic Stress Disorder (PTSD)[f], in drug users experiencing and perpetrating violence. For example, high rates of intimate partner violence have been found among women with both drug use and PTSD (80), while the presence of both cocaine dependence and PTSD is associated with increased perpetration of partner violence (81). Furthermore, psychological distress and PTSD associated with experiencing rape and physical assault are related to greater severity of drug use (66).

A history of childhood victimisation: A history of abuse and/or witnessing violence in childhood increases the risk of subsequent use of crack, cocaine, heroin, cannabis and methamphetamine (61). At the same time it increases the risk of being a victim of violence, particularly intimate partner violence, in later life (66,74,82-88).

Social functioning problems: Social functioning problems such as school, family, work and financial problems have been found to increase an individual's risk of perpetrating drug-related violence (7).

[e] The World Health Organization (1) defines young people as those between the ages of 10 and 29 years.

[f] PTSD following a traumatic event may involve intense fear, anxiety and/or feelings of helplessness. Symptoms can develop shortly after the event or can take years to emerge and include: re-experiencing the trauma through nightmares; obsessive thoughts; and flashbacks. Further, the individual may avoid situations, people, and/or objects which remind them about the traumatic event (79).

Drug use and dealing: Young people's drug use and initiation into drug dealing increases the risk of weapon carrying, and being a victim or perpetrator of violence (7,40,89-96). Furthermore, within the illicit drug market violence is common place, with firearms specifically used by dealers, runners[g] and users for protection, enforcement and punishment (26,30).

Type of drug: A range of drugs, particularly cocaine and amphetamines (including methamphetamine) are associated with increased aggressive and violent behaviour (31,46,49-52,72). Users of cocaine and/or heroin may be at greater risk of observing, perpetrating and being a victim of violence than users of cannabis (72,73). Individuals under the influence of benzodiazepines have been found to be more likely to act aggressively than non-intoxicated individuals. However, such findings may be due to high levels of pre-existing hostility and aggressive dispositions (53-55). The non-prescribed use of anabolic-androgenic steroids (AASs) is also associated with a number of psychiatric and behavioural changes including aggression, which in some cases may lead to violence. As with other drugs, whether such effects are caused by AAS use, or whether users are predisposed to such effects, remains unclear (97-101).

Relationship level factors

Parental use of drugs: A connection between parental use of heroin and cocaine and the risk of child maltreatment, poor parenting and neglect has been documented (22,67-69,102). A child's exposure to unsafe environments in which parental drug use occurs may increase their risk of being a victim of violence (66). Prenatal drug exposure is also associated with increased levels of parenting stress and child maltreatment (69).

Exposure to violence: Young people who have experienced or witnessed violence have been found to be more likely to use cannabis and hard drugs than those who have not experienced violence (102). Aggression and violence may be learned and transmitted within violent and illicit drug using families. A North American study found that children raised in households where crack is sold and used, routinely learn aggressive and violent behaviours through observation and interaction with their drug using parents and other kin (103). Exposure to family deviance and drug use are both risk factors for violence perpetration and illicit drug use (1,62,63).

Community level factors

Drug availability: A high availability of drugs within communities contributes to the prevalence of drug-related violence and is a risk factor for initiation into both drug use and violence (1,104-106). Children exposed to drug trafficking are also at increased risk of delinquency including drug use and violence (107). A higher number of arrests for drug possessions in a neighbourhood have been found to be positively related to the rate of child maltreatment (108).

[g] Individuals who deliver drugs to drug users for sellers.

Neighbourhood deprivation: Neighbourhood level factors such as a lack of employment opportunities, vacant housing, and a lack of street lighting allow illicit drug markets and associated violence to flourish (40,106).

Nightlife environments: Widespread drug use and the existence of drug markets in nightlife environments contribute to violence (109). Within nightlife-focused holiday resorts in Spain, use of cocaine and cannabis was associated with increased risk of being involved in violence during a holiday (15). Drug use has also been identified as a common occurrence amongst door staff working in nightlife settings (110,111). Furthermore, opportunities to control drug sales in nightlife have resulted in individuals with violent and criminal tendencies occupying and controlling door staff positions (111,112). In such environments door staff may use violence, intimidation and bribery to take control of illicit drug markets and may also be victims of violence by criminal gangs who force door staff to allow drug dealing to take place in night time settings (111).

Societal level factors

Culture of violence and drug use: A culture of violence, drugs and criminality contributes to risks of individuals using drugs and experiencing violence. For example, street children are at high risk of violence and illicit drug use as a result of the environment in which they live (113). Almost half of street children in Rio de Janeiro report a history of physical abuse and illicit drug use and one third report belonging to a gang (114). A study of Nigerian street children found a quarter operated as drug couriers, 14% abused drugs and a third had been arrested for street fighting and drug use (115).

Social and economic inequality: Social inequalities and poverty are also linked to violence. For example, a lack of money and employment opportunities can lead young people to become involved in drug markets, which in turn contributes to the risk of violence perpetration and victimisation (33,34,107,113-118).

6. Effects and costs of drug-related violence

Individual level: The consequences of drug-related violence are significant, placing huge burdens upon the health and well-being of victims, their families and friends, witnesses, and even perpetrators; whilst exacerbating fear within communities and placing pressure on health and other public services. Studies have found associations between the severity of drug use by perpetrators of violence and the severity of violence perpetrated (7). Further, non drug using individuals living with illicit drug users are at increased risk of death as an outcome of violence within the home (119). Aside from physical injuries, psychiatric effects are also evident with studies finding an association between violence exposure, subsequent PTSD and severity of substance use (66). The cyclical nature of drugs and violence means children of drug using parents are at increased risk of experiencing maltreatment and neglect (22,67-69). Furthermore, witnessing or experiencing violence during childhood can heighten the risk of drug use in later life (19,63,87).

Community level: On a wider level, drug-related violence can affect communities and society through, for instance, increasing the fear of crime and discouraging people from visiting areas associated with drug-related violence (26,120,121). Financial pressures are also placed on health and other public services, for example through the costs of treatment for victims and implementation of criminal sanctions for offenders. International demand for illicit drugs places large burdens upon countries where drugs are produced. Effects associated with drug trafficking within countries, and across country borders, include issues surrounding gun and gang-related violence, kidnapping, organised crime and corruption (3,5,38,122). Health and social problems associated with illicit drug markets and violence also undermine development efforts and contribute to the maintenance of social inequality in many countries (28).

Internationally, few countries routinely measure the involvement of drugs in violence, and the subsequent economic costs. Although this means the economic costs of drug-related violence globally are unknown, estimated costs are large. In the USA crime committed by those under the influence of drugs, or to gain money to obtain drugs, has been estimated at $103.6 million, which was the equivalent of 25.7% of the total cost of violent crime in 1999 (123). In the UK the social and health harms arising from heroin and/or crack cocaine use, including the costs of crime committed by users in order to fund their habit, were estimated to amount to £21 billion annually. Specifically, the annual costs of drug-motivated crimes including violence, sexual crime and robbery were estimated to be £4 billion (4).

7. Prevention

Rigorous studies on the effectiveness of prevention initiatives specifically addressing drug-related violence are scarce. However available evidence suggests that programmes that aim to prevent violence in drug-users, or seek to reduce violence and illicit drug use simultaneously, can have positive effects (124-131). Drug use and violence can also be addressed concurrently by screening victims presenting with violent injuries for drug use, and similarly drug users for involvement in violence. This section provides a brief overview of studies exploring interventions that address both drug use and violence[h]. The vast majority of studies have been implemented in high-income countries, particularly the USA. In general, strategies to reduce drug-related violence should incorporate a range of approaches that seek to address the individual, relationship, societal and environmental factors that contribute to both violence and illicit drug use.

A number of **demand reduction programmes** aimed at perpetrators and victims of intimate partner violence who abuse drugs have been found to be effective in reducing violence among substance using individuals. For example, The Dades County Integrated Domestic Violence model (USA) is a specialised treatment

[h] This briefing does not discuss interventions that work to reduce drug use or violence separately. For violence prevention, the World Health Organization has produced a range of evidence briefings covering forms of effective intervention, including: *Reducing access to lethal means; Increasing safe, stable and nurturing relationships between children and their parents and caretakers; Developing life skills in children and adolescents; Reducing availability and misuse of alcohol; Promoting gender equality; Changing cultural norms that support violence, and Victim identification, care and support programmes.*

programme addressing substance abusing behaviours, aggression and anger directed at intimate partners, based on the idea that aggression directed at intimate partners stems from issues of power and control. The programme has been successful in maintaining attendance at substance use treatment and also resulted in lower rates of violence towards intimate partners compared to individuals participating in separate intimate partner violence and substance use programmes (124).

Behavioural Couples Therapy (BCT) has also shown success in reducing drug use and aggression among perpetrators of intimate partner violence. BCT involves both partners in counselling with the aim of resolving common relationship problems and teaching skills to promote partner support for abstinence from substance use. The non-substance-using partner is also taught coping skills to apply when faced with a situation where intimate partner violence may occur. A number of studies have shown BCT participation reduces drug use, drinking, and relationship problems to a greater extent than individual treatment for the user (125-128). Given the co-occurrence of substance use and intimate partner violence, integrated programmes, as well as screening and referral between services (e.g. Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) [129]), offer an effective way of responding to both problems (130).

Multi-component programmes that tackle violence and illicit drug use simultaneously through a variety of measures can prevent both drug use and related violence. For example, Multisystemic Therapy (MST) is an intensive family and community-based treatment that aims to strengthen protective factors proven to reduce the risk of future offending and anti-social behaviour among juveniles. Intervention strategies include strategic and structural family therapy, behavioural parent training, and cognitive behaviour therapies. These use a variety of techniques to improve family function, parenting skills and coping strategies. MST identifies and responds to risk factors for youth violence and substance use at the individual, family, peer, school and community levels. The main aim of MST is to help parents effectively respond to young people's behavioural problems and to help young people cope with family, peer, school, and neighbourhood issues. MST has produced positive outcomes with violent substance using and dependent adolescents and has reduced violence, aggression and substance use among participants (131-133).

A number of **school and community based prevention** initiatives have reduced risky behaviours, including violence and drug use, among young people in the USA. For example, CASASTART[i] is a North American community and school-centred programme that targets high-risk youth between the ages of eight and 13 years, their families and communities. The programme aims to create a working partnership between schools, law enforcement, and community-based health or social service organisations to reduce drug-related crime and violence and initiation into substance use. At one year follow up young people participating in the

[i] Striving Together to Achieve Rewarding Tomorrow's, by the Center of Addiction and Substance Abuse (CASA).

programme have been found to be less likely to use, sell and traffic illicit drugs, to engage in violent crime, and to associate with delinquent peers (134-136). School-based programmes alone, such as Too Good for Drugs and Violence (USA) incorporates curriculum based activities with the aim of building protective factors against drug use and aggressive behaviour. However, the programme has only evidenced positive differences in young people's immediate intentions to participate in drug use and violence, with 45% of people having fewer intentions to smoke cannabis and 45% having fewer intentions to engage in aggressive behaviours (137, 138).

Also in the USA, **Life Skills Training** (LST) has been used to teach young people a range of skills including problem solving and decision making, resistance to media influences, stress and anxiety management and communication skills. The programme was reported to be effective in reducing tobacco, alcohol and drug use, and violence. Young people receiving LST were significantly less likely to engage in physical fights or delinquent behaviour at three month follow up (139). Mentoring programmes such as the Big Brothers Big Sisters programme in the USA have shown success in reducing drug use and violence among young people. The programme involves weekly four hour meetings with volunteer mentors on a one to one basis. Adolescents participating in the programme have been found to be 46% less likely to use drugs, 27% less likely to use alcohol, 52% less likely to play truant from school and a third less likely to hit someone over the 18 month follow up period (140-142).

Diversionary projects aimed at reducing offending and drug use among young people have been developed in several countries. In Peru, Deporte y Vida (Sport and Life) involves schools helping to prevent drug use, delinquency, violence and gang activities among disadvantaged children and adolescents through a programme of cultural, educational and sporting activities, including street football (143,144). The impact of these types of programmes on young people's drug use, offending behaviour and violence has yet to be fully evaluated.

Drug use and violence commonly occur in **nightlife environments**. Interventions that can help reduce the availability and use of drugs and prevent violence in such environments include: modifications to the nightlife environment itself (e.g. improved lighting), search policies upon entry to venues (e.g. for drugs and weapons), improving late night transport, and registration and checking of door staff for criminal convictions, including violence and drug dealing (109,145). While such interventions have been found to contribute to reduced violence in nightlife, their effects specifically on drug-related violence are largely unmeasured.

Internationally, whilst reducing the demand for illicit drugs will impact on the levels of drug-related violence, **reducing supply and access** to illicit drugs, and disrupting illicit drug markets is also important. A range of initiatives have been developed to tighten security and drug control along country borders, to reduce drug trafficking and its associated problems, including violence and organised crime (e.g. The

Programme of Assistance for the Prevention of Drug Abuse and Drug Trafficking in Belarus [146] and the United Nations Office for Drugs and Crime (UNODC) Strategic Programme Framework for Central Asia [147]). However, a comprehensive description of such programmes is beyond the scope of this briefing.

8. The role of public health

Working alongside health, criminal justice and other agencies, public health professionals have a central role to play in preventing drug-related violence (see Box 2). Promoting an evidence-based public health approach to violence, public health professionals should encourage and facilitate the use of data and research from a wide range of sources to provide a comprehensive understanding of the extent, causes and risk factors relating to drug-related violence.

Developing intelligence for effective prevention

Despite a growing research body, internationally there remains a dearth of intelligence on the extent of drug-related violence and the relationship between these two public health priorities. Health, criminal justice and other agencies in contact with victims and perpetrators of drug-related violence are ideally placed to collate and disseminate a wide range of information on levels and patterns of such violence. This information is paramount to understanding which population groups and communities are most at risk and targeting appropriate resources and interventions where they are most needed. Public health professionals are ideally placed to advocate for stronger data collection systems, collate data from a range of sources and use such data to identify key issues, trends and appropriate target groups.

Box 2: The role of public health agencies in reducing drug-related violence

- Collating and disseminating intelligence on the magnitude of the problem and groups at higher risk.
- Promoting, funding, and conducting research examining the links between drugs and violence, and the costs to society.
- Identifying, informing, developing, implementing and evaluating interventions to reduce drug-related violence.
- Advocating for policy to reduce drug use and violence.

In addition to routine data collection, research on drug-related violence must be expanded to provide greater evidence on risk factors and effective prevention measures. Given that drugs have different pharmacological effects and are taken within differing social contexts, research should focus on which drugs have a greater association with violence, as well as the effects of dose, individual, situational and environmental factors. Examination of variations in global patterns of drug use and violence would provide further opportunity to identify and exchange comparative

information on the nature, reasons and risk factors for drug-related violence. A wide range of measures are being implemented and evaluated throughout the world, seeking to prevent drug use and violence. Strong links between these and with other health outcomes (e.g. HIV) should be reflected in programme evaluations. Thus, monitoring a wider range of outcomes would not only provide additional information on violence and drugs but also greater insight into links between them. While data and evaluations described above are required to develop prevention initiatives in all countries, such information is particularly scarce in low to middle income countries, where evidence on effective prevention is limited but drug-related violence can be high.

Services for victims and perpetrators of drug-related violence

Given the multi-agency role of public health, professionals should help raise awareness of the links between drugs and violence and the role of services in responding to these issues. Within drug treatment and other health settings (e.g. emergency rooms, services for intimate partner violence), staff are well placed to identify concurrent drug and violence-related problems amongst both victims and perpetrators. However, professionals may not recognise, identify, or intervene to support victims or help perpetrators cease their abusive behaviours. While interventions that aim to identify and address drug-related violence should be developed and promoted, resources are required to provide such services and train and support staff. In general, services dealing with violence-related incidents should be aware of the links with drug use, be able to identify potential problems and have access to a range of options for providing support or referral.

Advocacy, collaboration and promoting prevention

Public health practitioners should promote a multi-agency approach to the prevention of drug-related violence that aims to tackle risk factors at the individual, relationship, community and societal level. Possible stakeholders include international organisations, governments, health services, criminal justice agencies, local authorities, grass-roots organisations, the media and academics, as well as local communities. At the national and international level, health organisations have a key role in advocating for policies that acknowledge the links between drugs and violence and aim to address their causes (e.g. social inequalities, poverty, poor parenting).

9. Policy

Across the WHO regions, a range of policy measures already exist that aim to reduce the impact of illicit drugs and violence internationally. Specific to drugs, the United Nations has agreed a number of conventions that are internationally accepted as the vehicle for combating transnational organised crime and drug trafficking (see Box 3, Page 17). Furthermore, the UNODC anti-drugs campaign aims to raise awareness of the major societal problems that illicit drugs represent and mobilise support for drug control. The campaign aims to tackle different aspects of drug control including: drug use; drug cultivation and production; and illicit drug trafficking (3).

The World Report on Violence and Health (1) sets out a public health approach to preventing violence within which drugs are highlighted as a risk factor for violence perpetration and victimisation. World Health Assembly resolution WHA56.24 (148) endorses the implementation of its recommendations. Furthermore, the international Violence Prevention Alliance has been established to provide a forum for the exchange of intelligence and practice between governments and agencies working to reduce violence across the world.

Priorities for action

- The consequences and control of drug-related violence are multi-agency problems which require a co-ordinated response between health professionals, criminal justice and other agencies. Public health has a critical role in coordinating a multi-agency response to prevent drug-related violence, underpinned by shared intelligence and a common evidence base.
- Whilst tackling current drug problems is a major judicial issue, public health professionals should play a key role in developing policies and strategies that aim to tackle the root causes of drug-related violence. Such policies should encompass evidence informed prevention, service development for those involved in violence and training for commissioners and practitioners. They should also seek to develop shared intelligence on drug-related violence across specialist and generic services.
- There are links between drugs and violence at the individual, relationship, community and societal levels, and therefore tackling the causes and consequences requires an integrated approach that recognises and responds to risk factors at all these levels.
- Increased investment is required to evaluate the effects of co-ordinated and integrated programmes to prevent and treat both drug use and violent behaviour, and to disseminate evidence based practice.
- Whilst investment for researching links between illicit drugs and violence is required globally, efforts to increase the evidence base in low to middle income countries is paramount in order to understand the impact of drug-related violence in different settings.

- Internationally, both health and criminal justice agencies should aim to improve and standardise the recording of illicit drug use and its involvement in violence.
- Capacity building and training for staff is required especially for those who regularly come into contact with drug users, or those affected by violence, in order to allow them to identify concurrent drug and violence-related problems and provide support or refer individuals to appropriate services.

Conclusion

Interpersonal violence and illicit drug use both pose major public health challenges. This briefing identifies strong associations between being both a victim and perpetrator of violence and illicit drug use. Moreover, a range of risk factors at the individual, relationship, community and societal level have been identified that increase an individual's risk of experiencing drug-related violence. Although a clear relationship exists between drugs and violent behaviour, the nature of this link is multi-faceted and few studies have examined causal relationships. These links exist for several reasons, some direct (the pharmacological effects of drugs) and some indirect (violence occurring in order to attain drugs, violence within illicit drug markets and drug use as an outcome of violent victimisation). Despite a range of evidence suggesting links between various categories of drugs and violent behaviour, there is a lack of prevention interventions aimed at reducing violence that is specifically drug related. Multi-agency strategies to reduce drug-related violence should adopt a broad approach aimed at addressing factors that contribute to both violence and illicit drug use. Although traditionally considered a problem solely for criminal justice, a public health approach to drug-related violence offers a way of better understanding, responding to and ultimately preventing, violence that is related to illicit drug use.

Box 3: United Nations conventions for combating transnational organised crime and drug trafficking

Convention against Transnational Organised Crime, 2000: is a legally-binding instrument committing States to take measures against transnational organised crime including: drug trafficking, the creation of domestic offences, the adoption of frameworks for mutual legal assistance, extradition, law enforcement cooperation and technical assistance and training (149).

Convention Against the Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988: provides comprehensive measures against drug trafficking, including provisions against money laundering and the diversion of precursor chemicals. It provides for international cooperation through extradition of drug traffickers, controlled deliveries and transfer of proceedings (150).

Convention on Psychotropic Substances, 1971: established an international control system for psychotropic substances. It responded to the diversification and expansion of the spectrum of drugs of abuse and introduced controls over a number of synthetic drugs according to their abuse potential and their therapeutic value (151).

Single Convention on Narcotic Drugs, 1961: aims to combat drug abuse by coordinated international action. There are two forms of intervention and control. First, it seeks to limit the possession, use, trade, distribution, import, export, manufacture and production of drugs exclusively to medical and scientific purposes. Second, it combats drug trafficking through international cooperation to deter and discourage drug traffickers (152).

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